AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-274 (Canceled)

Claim 275 (Presently Amended) A method of producing a library comprised of chimerized but defined polynucleotide sequences each of which is comprised of a defined number of polynucleotide segments that are assembled in an ordered fashion, the method comprising:

a) generating a plurality of defined polynucleotide segments of substrate nucleic acid sequences

~~that~~ wherein said substrate nucleic acids encode full-length enzymes,

and wherein ~~the~~ borders defining the polynucleotide segments are selected ~~from the aligned~~ by aligning the substrate nucleic acid sequences; and

b) reassembling said defined polynucleotide segments in order

thereby producing the library of chimerized but defined polynucleotide sequences,

such that said segments are reassembled in an ordered fashion

~~for each~~ to produce each chimerized but defined polynucleotide ~~sequences~~ sequence

encoding a full-length ~~enzymes~~ enzyme.